

# COLLABORATION-KEY FOR UNLOCKING AUCKLANDS GROWTH

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## **ABSTRACT (300 WORDS MAXIMUM)**

Auckland's population is growing by 44,000 people per annum. Auckland Council has a commitment under the Auckland Housing Accord to respond to the large increase in growth. Development initiatives such as the Special Housing Areas and Spatial Priority Areas demand short timeframes for approving developments. This rapid growth puts pressure onto resources to provide accurate information within short time frames.

Results obtained from Stormwater models are critical in informing decisions around flood risk assessments and capital projects to support the growth initiatives. The traditional approach of procuring consultants to build Stormwater models has presented difficulty in meeting these timeframes, being responsive to change and allowing room for flexibility or innovation.

Auckland Council established the Modelling Project Office (MPO) in January 2015 to improve responsiveness for growth initiatives. The MPO is a panel of six secondees and their resources in their home offices. The MPO allows for improvement in scoping, quality, flexibility and consistency in the deliverables. The MPO is set up to deliver up to \$2.2 million per annum of modelling work over three years. A performance framework was jointly developed to ensure the value of the MPO is realised. This framework benchmarks both consultants and Auckland Councils performance to drive innovation and continuous improvement.

This paper explores the benefits of a Modelling Project Office approach and how it differs to the traditional approach in terms of procurement, scope, collaboration, time and cost. It provides insights into how a collaborative approach between consultants and clients achieves better outcomes and cost savings for both parties and the local industry's technical capabilities. It also provides discussions on the lessons learnt through the process.

## **KEYWORDS**

**Collaboration, Flooding, Growth, Special Housing Areas**

## **PRESENTER PROFILE**

Nick Brown is the Flood Planning Manager for Auckland Council.

## INTRODUCTION

The objective of this paper is to explore the benefits of the Modelling Project Office (MPO) approach. It provides insights into how the collaborative approach between Consultants and Auckland Council (AC) achieves better outcomes for both parties and the local industry's technical capabilities.

The MPO is a panel of six consultants seconded in Auckland Council and supported by the wider resources of their individual consultancies. The MPO provides additional capabilities for Auckland Council Stormwater Planning team to respond to Auckland's stormwater infrastructure and policy requirements. It was established January 2015, following an open tender process.

The MPO was initiated in response to historically sub optimal procurement and to meet development pressures. The MPO provides AC sufficient resources to respond in a cost and effective and timely manner to the region's demands, which have shortened delivery times due to:

- the demand for growth,
- the Hasha legislation,
- Special Housing Areas, ten tranches to date
- the Future Urban Land Supply Strategy,
- Central Government,
- local political pressures,
- and large developer interests.

Prior to the MPO under the legacy procurement approach, many planning studies were cumbersome, costly, low quality, inflexible and ultimately lead to significant rework and delays. In summary the MPO:

- seconded the best individuals in the region regardless of which consultancy they worked for to Auckland Council,
- reduced the size of the work awarded so the scope of each piece of work was tightly defined,
- creates a collaborative environment focussed on achieving outcomes,
- allows AC to choose the best resource for each particular piece of work based on experience, availability, enthusiasm and ability to work with the person who needs the work to be completed,
- created a one team approach and ignore the fact that the resources didn't all work for the same organisation,
- provides cost savings for both council and consultants due to minimising rework
- achieves additional outcomes such as knowledge sharing, trust between Council and the Consultants and flexibility of scoping which will produce a long term benefit for the industry and provide value to ratepayers.

The following sections describe the MPO solution in further detail.

# 1 BACKGROUND

The vision of the Auckland Plan is to become the world's most liveable city. One of the key roles for Auckland Council's role within this vision is to provide sufficient development opportunities to meet Auckland's housing needs. Auckland Councils Stormwater Department's role in this is to continue to maintain, renew and improve our existing infrastructure, to support the region's expected growth and manage the risk of flooding.

## 1.1 AUCKLAND IS GROWING

Auckland's population has grown steadily and is projected to continue to do so throughout the period covered by the Auckland Plan. Auckland's population is expected to grow to 2.5 million by 2041 as is illustrated in Figure 1. Auckland is the fastest growing city in New Zealand and the only one which is forecast to sustain a rapid rate of growth. Therefore the challenges for Auckland are different than for any other region in the country. Historically Auckland has tracked along the high growth projection. Over a 25 year period the difference between the High and Medium growth projections is a large difference in the total number of people.

Figure 1 also highlights that the Auckland Region contains many more people than any other centre in New Zealand. With a growth rate of 44,000 people per annum Auckland is growing at the rate of one Hamilton every three years.

The impacts of growth on the provision of public services, infrastructure and our rural and urban environments must be carefully managed, to enhance what we value about Auckland.

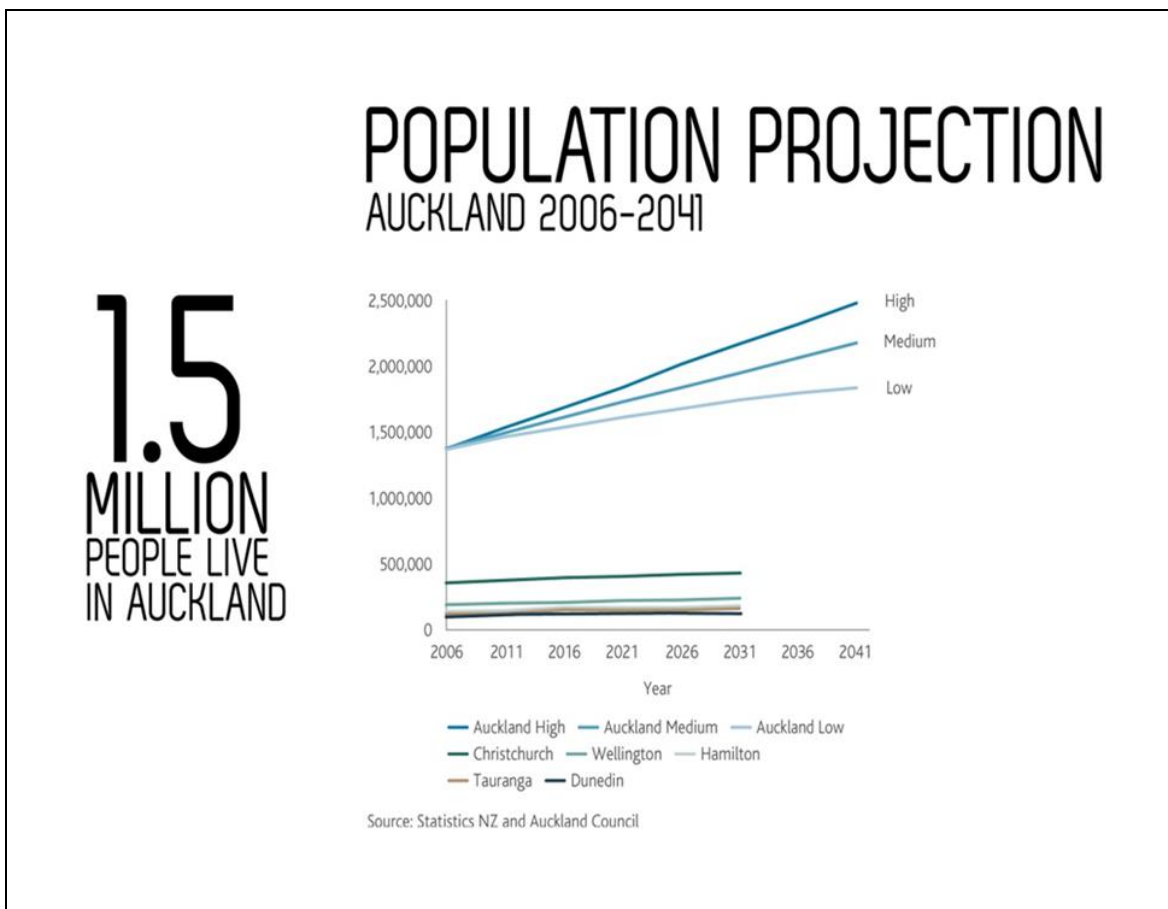


Figure 1 Population Projection of Auckland to 2041

## 1.2 AUCKLAND'S NEED FOR HOUSING

To enable Auckland's growth needs the Hasha legislation was passed under which Special Housing Areas (SHA) are assessed. The legislation compresses the timeframes for assessment to 3 months for redevelopment and 6 months for Greenfield developments; the process has limited notification and appeals. Auckland Council also has spatial priority areas (SPA) which incorporates most of the SHA's.

There will have been ten tranches of SHA's processed prior to the legislation expiring in October 2016 – currently 9 tranches are complete. It's expected that around 39,000 new homes and sites will be consented by 30 September 2016 in the three years since the legislation has been set in place.

Following on from the SHA's the Future Urban Land Supply Strategy (FULSS) will be implemented. The strategy aims to determine what integrated servicing is required in areas currently zoned future urban with no current active urban zoning. The strategy applies to development in the Future Urban zone over the next 30 years. It is envisaged that approximately 11,000 hectares of Future Urban zone land is provided for in the Proposed Auckland Unitary Plan. The 11,000 hectares of land zoned future urban is equivalent to approximately 1.5 times the urban area of Hamilton.

Development in this zone will accommodate some of the anticipated growth in Auckland's population. To ensure that this land is available for development, the planning for infrastructure is crucial. The table below indicates the approximate investigation costs that will need to be incurred for the infrastructure that will service the development (Auckland Council, 2015).

Bulk infrastructure costs		
<i>Indicative, inflated costs prior to any detailed design. Note that for areas to be development ready in any given decade, some infrastructure costs will be incurred in the previous decade. Costs per decade are therefore not directly correlated to the number of houses provided in each decade. Costs will be in the order of:</i>		
Decade One 2012 - 2021	Decade Two 2022 - 2031	Decade Three 2032 - 2041
<b>\$2.9 Billion</b>	<b>\$6.7 Billion</b>	<b>\$7.4 Billion</b>
Transport - \$900m	Transport - \$2,300m	Transport - \$2,800m
Water/Wastewater - \$1000m	Water/Wastewater - \$1,600m	Water/Wastewater \$2,100m
Stormwater - \$100m	Stormwater – \$900m	Stormwater – \$500m
Open Space/Community - \$900m	Open Space/Community - \$1,800m	Open Space/Community - \$2,000m

Table 2 Bulk Infrastructure costs calculated for the FULSS

This large peak in workload and the time constraints due to the SHA, SPA as well as the FULSS puts pressure onto already stretched resources to provide accurate information within limited time.

# Special Housing Areas (Tranches 1 - 9)

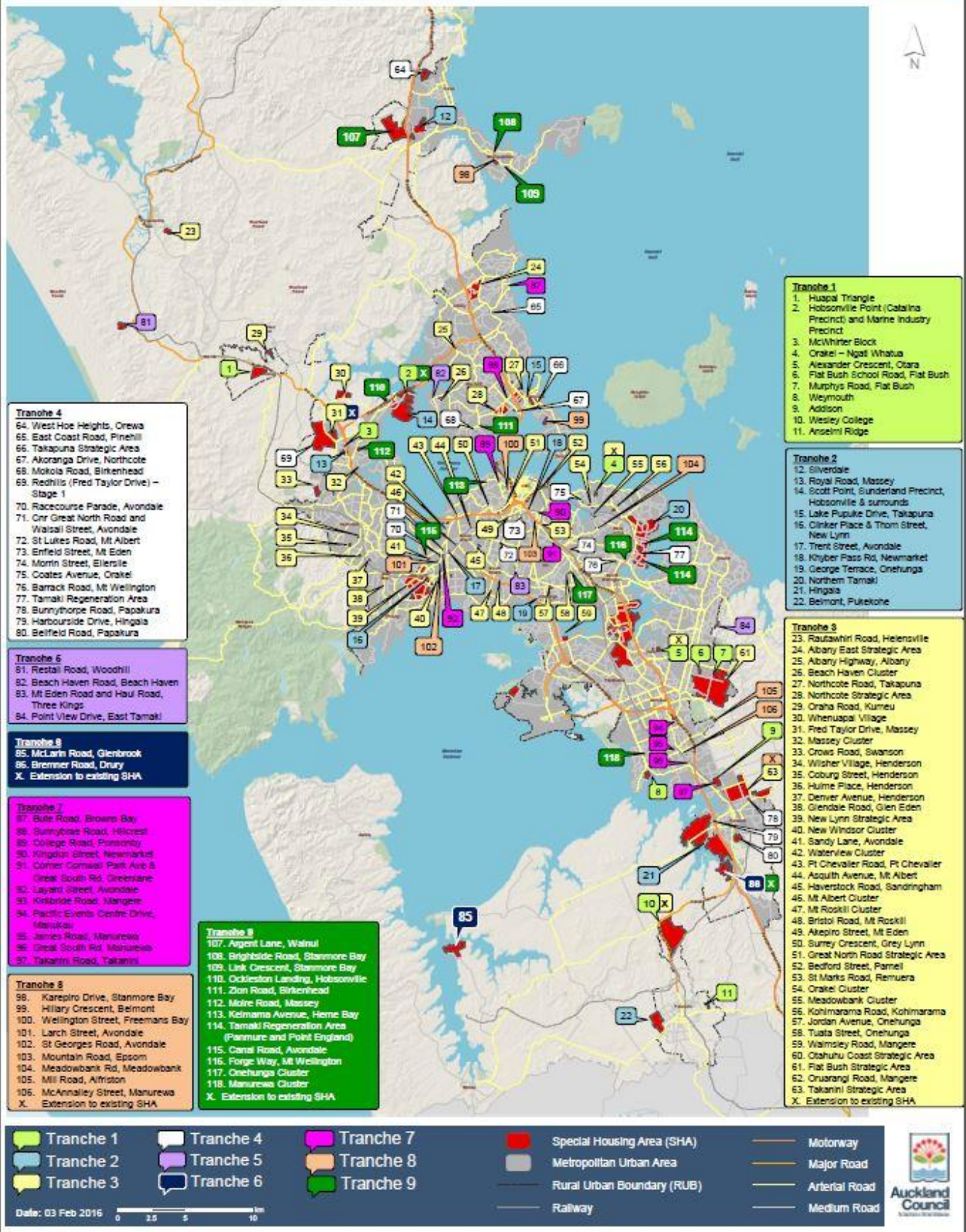


Figure 2 Tranches 1 to 9 of the SHA

### 1.3 PROCUREMENT AT AUCKLAND COUNCIL

Procurement at Auckland Council has undergone a transformation over the past 15 months. Auckland Council spends more than \$300 million per annum on professional services. There is recognition by Auckland Council of the responsibility to the market to ensure processes don't introduce an undue burden to the market and also to support new innovations and products to help develop New Zealand's economy. Therefore the short term as well as the long term interest of the community is served.

From Council amalgamation in 2011 through to 2015, Catchment modelling projects were tendered out in the open market using a weighted attribute assessment approach. The objective of the approach was to encourage competitive pricing and value for money for Council. Over the next four years, it was clear that managing these often complex, skill-intensive modelling projects was time consuming, challenging and the scope was often misunderstood. This could have been the result of both Council and Consultant having a difference in understanding of the scope and objective, or just one of the parties (i.e. known by Council, but not by Consultant or unknown to both as illustrated in Figure 3). The result being that key projects weren't delivered and incurred Auckland Council significant additional costs and time.

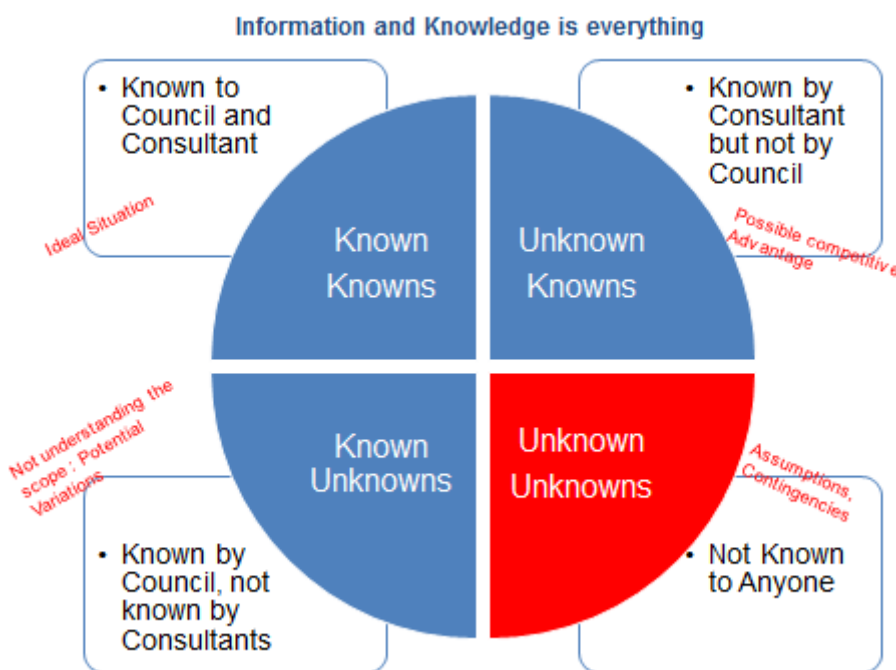


Figure 3 Information Matrix

## **2 THE MODELLING PROJECT OFFICE**

With the changes in procurement as well the pressures in workload and programme, the opportunity was there to find a better way to deal with the issues experienced. One of the solutions was to create the MPO.

The procurement approach for the MPO was to advertise the request for proposal on the open market as per the traditional procurement approach. The request was for six secondees, up to four senior (more than eight years' experience) and up to three intermediate consultants (between four and eight years' experience). The aim was to get the best consultants seconded into the office, regardless of which consultancy they are from. The tender also requested information of "the wider pool of resources": the consultants in the home office which can be called upon for support. Nine companies and 23 selected secondees tendered for the MPO. The proposals were evaluated using the weighted attributes method.

Individual CCCS Contracts were set up between Auckland Council and the six consultants to deliver the services required within the MPO. The selected six consultants are employed on agreed hourly rate and they are required to commit to a minimum of 16 hours a week working from Auckland Council offices, typically the secondees work 24 hours per week..

The overall contract is set up as a Master Service Agreement (MSA), which allows multiple contracts (referred to as a work packages) under the umbrella CCCS contract for the same supplier. This allows discrete work packages of collaboratively agreed scope, programme and outcomes to be allocated to the individual secondees and staff in their home offices. The work packages may have different project manager and will receive different purchase order numbers but are still under the same MSA that has been set up.

## **3 CHANGING THE WAY WE SCOPE THE WORK**

Previously, the catchment modelling work was scoped to complete the entire Flood Hazard Mapping Model Build lifecycle: from the initial data gap analyses, surveying to model build, system performance, flood mapping and flood damage assessment. This could be potentially a two to three year contract once awarded.

In Figure 4 (from the Auckland Council Modelling Specification (November, 2011)) it can be seen that a Model Build and System Performance process has only four "holding points" where Council and the Consultant are forced to discuss the model build during this process. This could only be twice a year if the project stretched to a 2 year life.

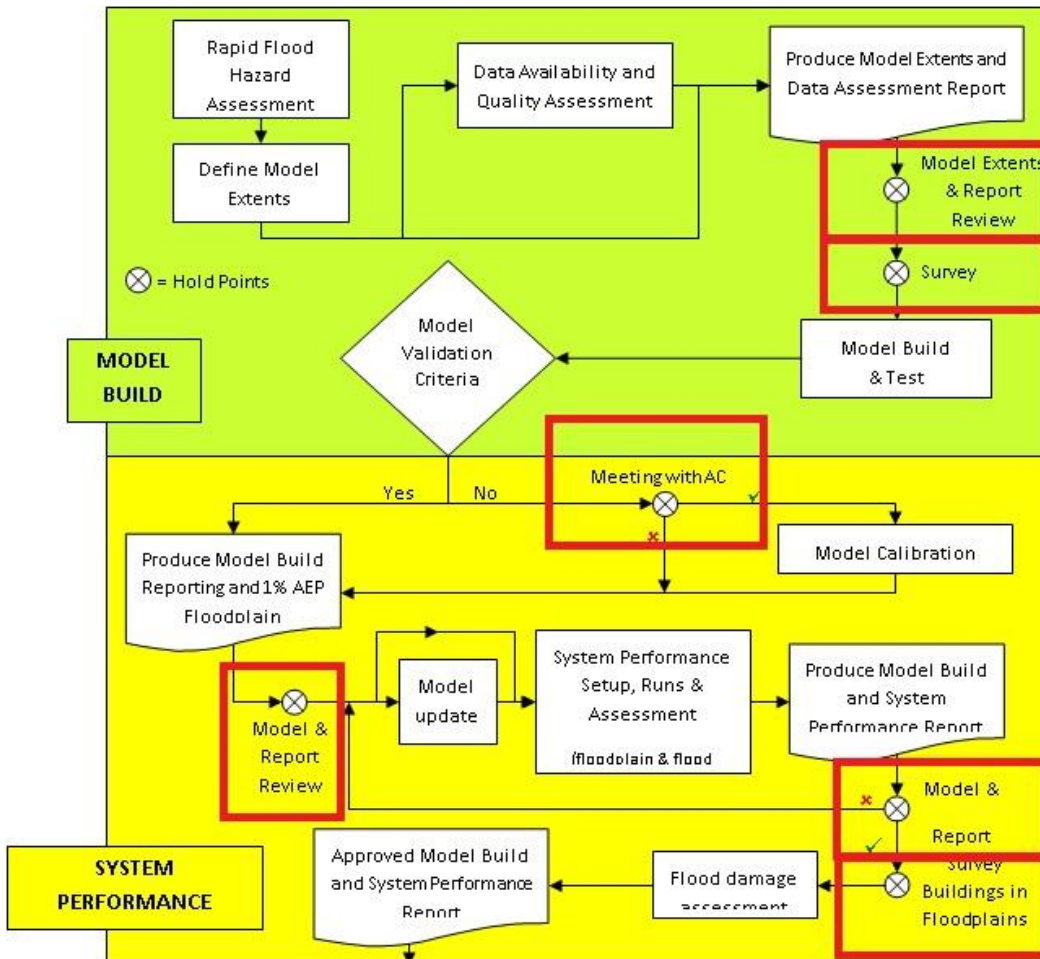


Figure 4 Model Build Process

To change this approach, the scope of the work that is allocated through the MPO is tightly defined with a set programme and deliverables and with collaboratively agreed work. The work is packaged up in more manageable quantities for both Council and Seconded.

Another improvement is that the quantum of work and methodology is agreed between the consultant and the Council project manager. This is to ensure that the scope is well understood and expectations are clear. Once this is approved, the work package is jointly prepared and submitted for management approval. The work package includes identification of the task purpose, a programme and identification of risks relating to quality, price and budget. Due to the collaborative approach of setting the scope, the consultant has the opportunity to set the price of what it would cost to provide the quality and the work that is expected.

Due to the collaborative nature of the MPO, any scope changes do not come as a surprise and are often discussed jointly and noted before any work commences. In a regular contract, a variation would be required for any scope changes, often with the result of programme slippage due to sign-off and negotiating. Discussions at project close out are held about any changes that have occurred as part of a project review process.



By setting the scope collaboratively and adjusting it together as priorities change or issues are uncovered, it is realised that the modelling work can be in the “Known-Known” quadrant of the information matrix and therefore is better manageable (see Figure 5) and doesn’t contain any surprises.

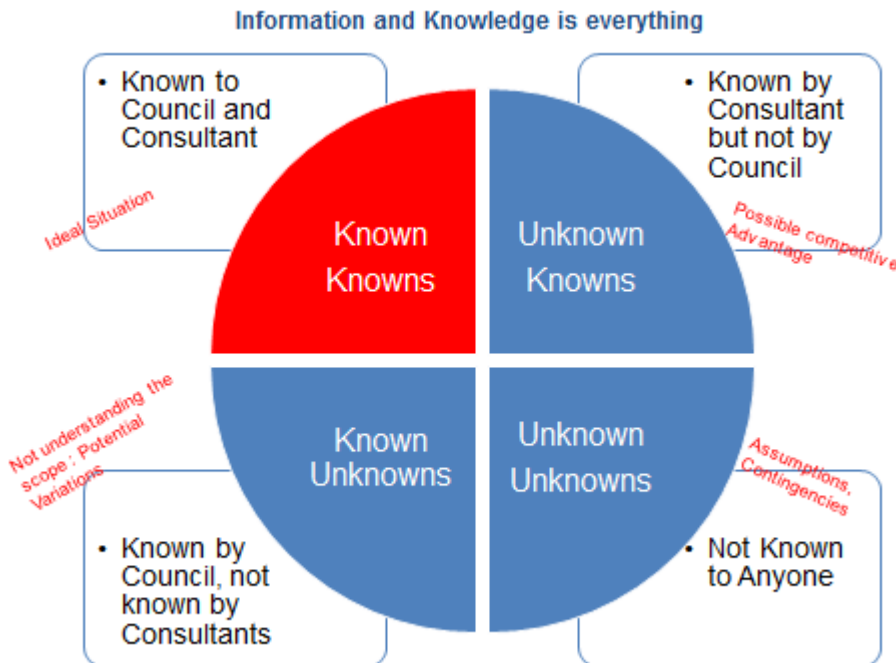


Figure 5 Information Matrix

What we also noticed by setting the scope in more manageable packages, is that work is being delivered twice as quickly as before. It is generally agreed between the Consultants and Council that this improvement is due to significantly improved communication which reduces the time between issue identification and issue resolution. The improvements in communication generally relate to increased frequency of communication, improved clarity of discussion (usually as a result of discussion relating to conversations (i.e. as opposed to e-mail) and greater availability of both parties for short discussions, because both parties are working from the same office.

#### 4 ENCOURAGING COLLABORATION

The work delivered in the MPO is focused on achieving outcomes. This is critical because of the timeframes set to deliver quality work to support the development pressures.

What we are finding with the MPO is that the quality of work is generally of very high standard and needs minimum review time and nearly no rework. This could be a result of the collaborative approach of setting the scope, the regular check-in of the consultant with the project manager or due to the personalities of the secondees. The collaboration experienced may be due to being co-located in the same office and the drive for self-improvement or even just realizing that both Council and the Consultants have a shared goal in common and that is to be a part of making Auckland “the world’s most liveable city”.

The collaboration experienced is not only between the consultants and the consultant and the Council project manager, but the collaboration between other stakeholders is also being realised and promoted. The MPO deals with a number of stakeholders; these include other Auckland Council departments, Auckland Transport, Watercare, Ports of Auckland and developers.

A 360° collaboration survey was completed anonymously as part of the Performance Framework by the individual secondees and the relative project managers. The survey was divided into three main questions: how easy it is to work with each other, how innovative and pro-active we are and whether the “way we work” is successful. Figure 6 below shows what the results looked like following the survey. The real value of the responses is in the improvements that Auckland Council can implement and also the benefits that are expressed.

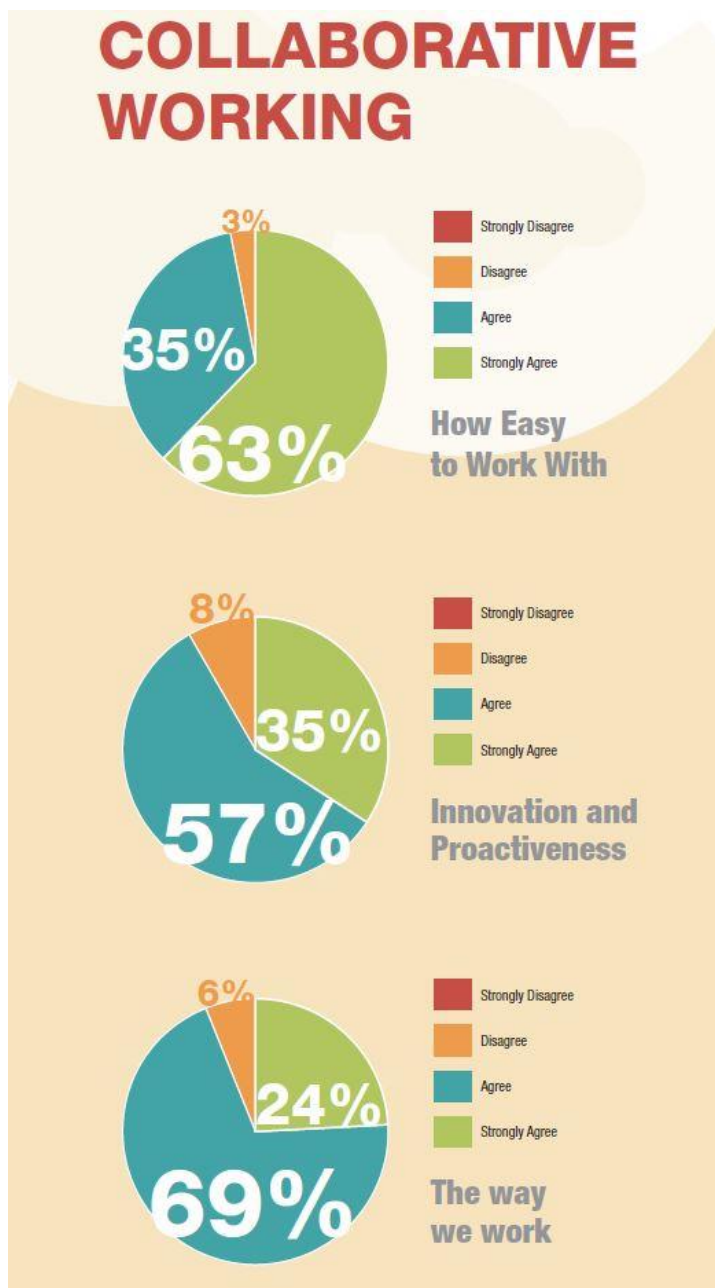


Figure 6 Collaboration Survey Results

Although collaboration is encouraged and also realised, there is still some healthy competition between the consultants which drives the continuous self-improvement, not only for the Secondee but also the MPO as a whole.

## 5 BEST PERSON FOR THE JOB

As modelling outcomes are key to nearly all of the planning decisions for informing developments, the MPO aims to complete any modelling work before or during the planning decisions for the individual developments. As it can be seen in Figure 7, there is a wide spectrum of work that needs completing by the MPO. One of the advantages of the MPO arrangement is that Council is able to choose the best resource for each particular piece of work based on experience, availability, enthusiasm and ability to work with the person who needed the work to be completed. And vice versa, the Secondee is able to secure work they enjoy doing or would like to learn doing and therefore not only is job satisfaction realised but also learning opportunities available. These are available to the Secondee and the wider pool of resources. Furthermore, the collaborative approach leads to sharing of innovative ideas, which is in contrast to the experience from lump sum contracts.

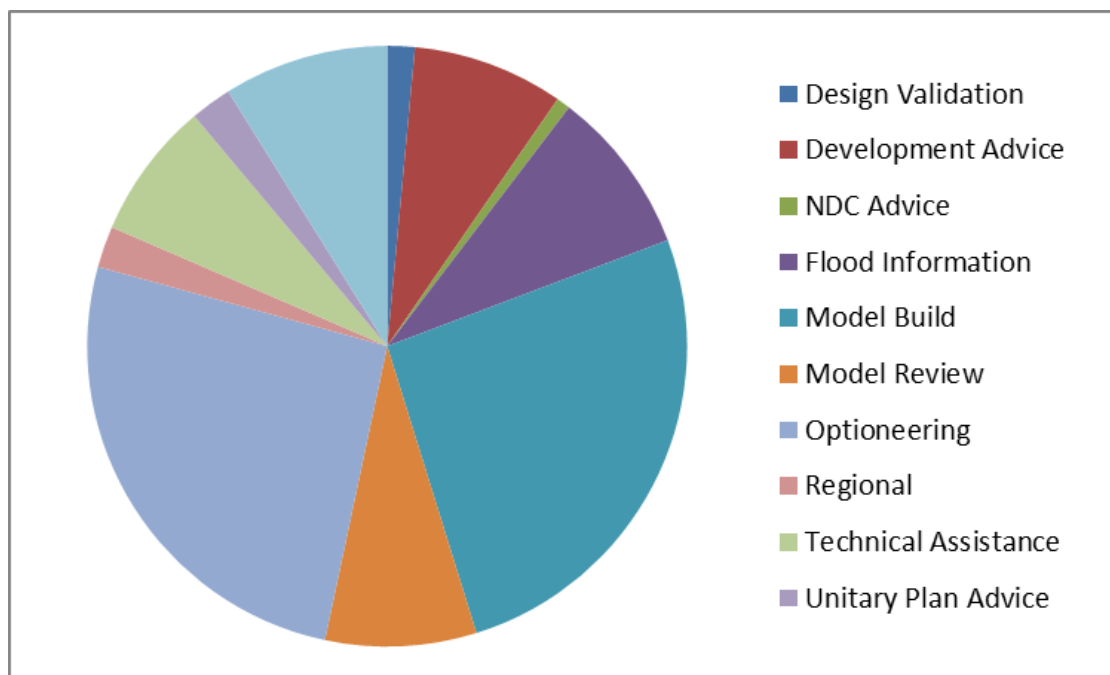


Figure 7 Modelling Project Work type

As can be seen in the figure below, the distribution of the work packages is not the same between the consultants and is dependent on the availability of the consultant as well as the skills required.

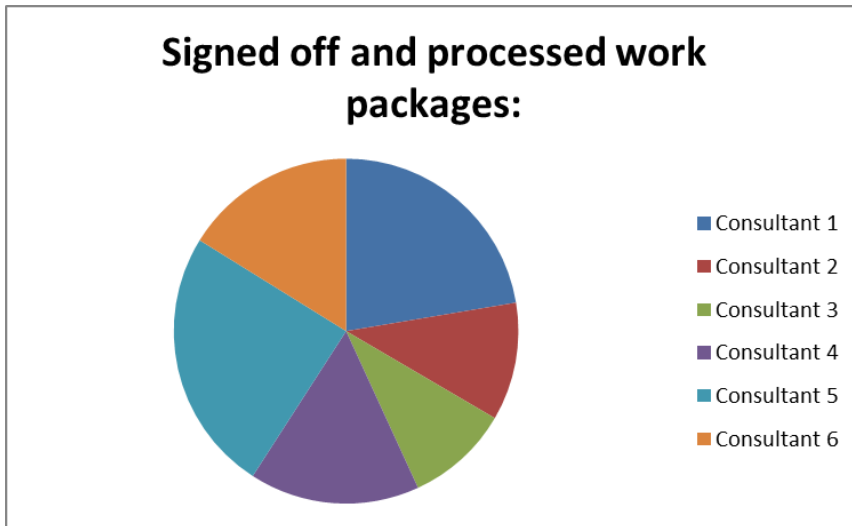


Figure 8 Work packages by Consultant

## 6 ONE TEAM APPROACH

The secondees and Council recognised that in order to be successful and deliver the work necessary for Auckland's growth, everyone on the MPO is equally responsible for the quality and the success of the MPO.

An example of this One Team Approach was the willingness of the secondees to share their knowledge at a recent all-day workshop where everyone got together to share their lessons learned from various projects and their recommendations.

Another outcome of the One Team approach is that the deliverables are consistent from all the secondees due to the regular communication with each other as well as understanding the needs and expectations of Auckland Councils objectives. This is another improvement compared to the outsourcing modelling contracts where the check in with the project manager is only at draft deliverable time.

## 7 MEASURING THE MPO – THE PERFORMANCE FRAMEWORK

To measure the performance of the MPO and to justify renewing the contracts for the MPO it a performance framework is required.

The performance framework was initially set up to score the individual consultant and their Auckland council project manager on the work package against the usual project management KPI's: programme, quality and cost. At the project close out of each work package the consultant and the project manager get together and discuss their performance against the three KPIs.

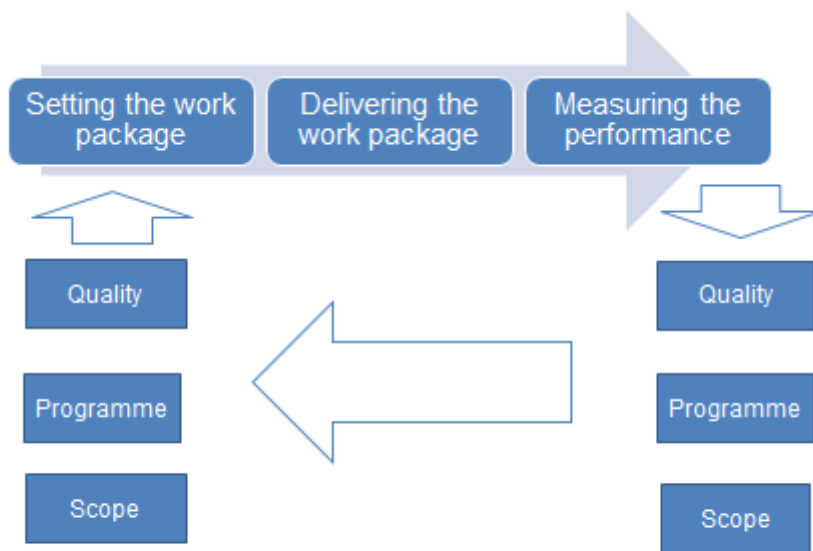


Figure 9 Expected Benefits of the MPO

The close out discussion provides the opportunity for constructive feedback to/from Council and Consultant. This provides the opportunity to also discuss the lessons learned and any issues that have arisen during the project. The real value in these close outs lies in providing this feedback and improving the next work package that gets scoped up.

As the issues are raised in a collaborative way, it is very constructive in driving a culture of self-improvement.

The project close out scoring sheet is used to track the ongoing trends and issues of the MPO as a whole. The aim is to hold quarterly reviews with the individual consultant and discuss the scoring and any issues. The opportunity here is also to provide feedback on how the MPO is working in general, what the roadblocks are and what the opportunities are.

One of the biggest concerns at the start of the Performance Framework was the sharing of the scores. The concern was that this would drive competition between the six consultants and their companies. This competition would contradict the collaborative behavior that the MPO is trying to achieve. Because the MPO performed well and all consultants performed above target levels there were no performance issues to manage. It was decided to track the MPO success as a team and list the six highest ranking projects only.

## 8 THE OUTCOMES OF THE MODELLING PROJECT OFFICE

A total of 135 work packages have been signed off through the MPO to date. This equates to about 20,000 resource hours. Of these 20,000 hours about 12,000 resource hours have been invoiced since the contract. At the start of the contract it was envisaged that mainly the Secondee will be working at Auckland Council offices and will be completing the work packages. What has been really successful though is, that the secondees have filtered work through to their home offices and this has allowed to turn around work within very tight timeframes without having to sort out competing priorities due to lack of resources.

It was anticipated that the MPO would improve the quality, programme and scope of projects when comparing to the previous approach. Where the Performance Framework concentrates on the above mentioned three measurable KPI's of a work package, it is the collaboration, the ability to be flexible, improved communication and sharing of knowledge that is driving the delivery of the work and the continuous improvement of delivery. This also has wider implications as is illustrated in Figure 10: the relationship between Council and the Consultant is built on Trust, the future generation is upskilled and Value for Ratepayers is realised.

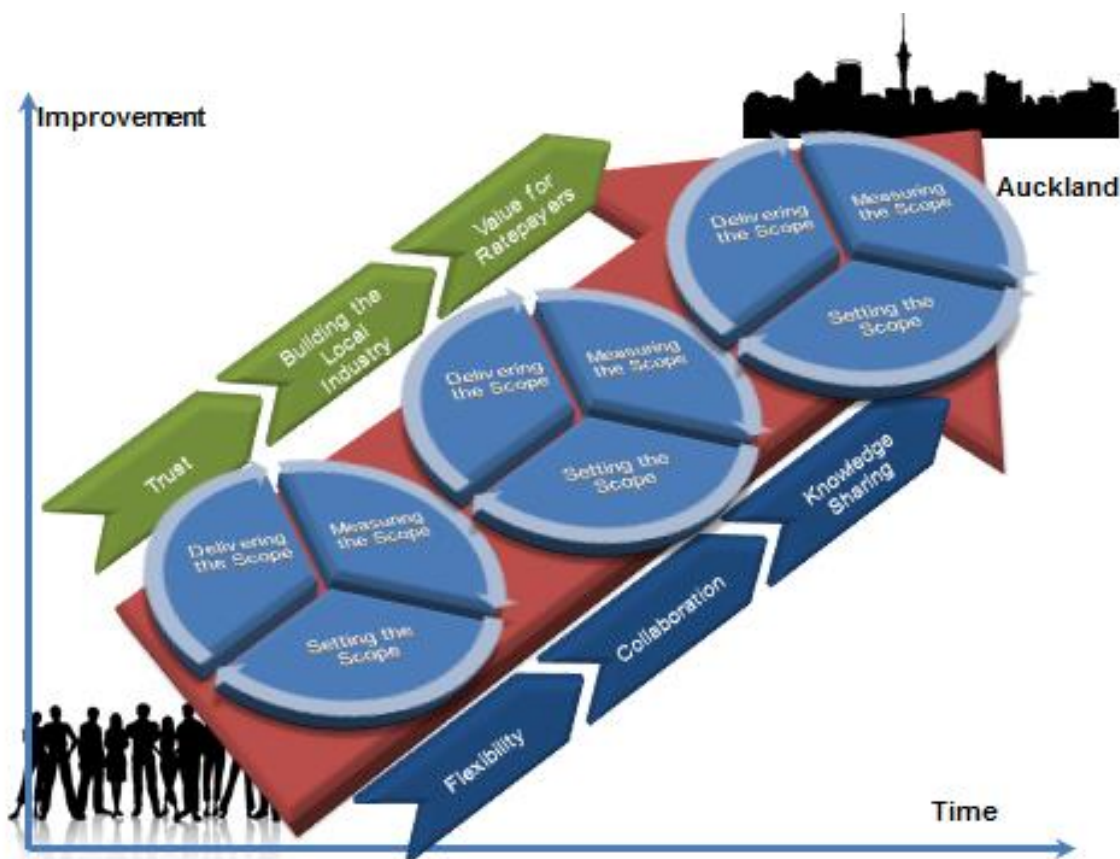


Figure 10 Continuous Self-Improvement within the MPO

### 8.1 KNOWLEDGE SHARING

Knowledge transfer between the staff at council and consultants is encouraged through the MPO and this allows collaboration as well as retention of knowledge of the catchment

and the flood mitigation options by Council staff directly involved. Knowledge transfer between the consultants is also happening when the consultants sit with each other in the office. This is again a result of the way the MPO is set up.

## **8.2 TRUST**

The guarantee of work in the long term and the in-house collaboration promotes the trust and confidence of long term work and so the consultants are free to help each other and extend the knowledge to their wider pool of resources without the competition. This is a huge benefit for the local industry since it improves long term resilience to resource changes, whilst also developing a greater understanding of the needs of Auckland Council. Overall this helps to provide and deliver great value projects to Auckland ratepayers.

## **8.3 BUILDING THE LOCAL INDUSTRY**

The long term benefit of knowledge sharing is that the local industry is promoted. Consultants can train their resources and retain them or grow the resources due to interesting work. The junior staff which generally has minimum contact with the client is exposed to the objectives of Auckland Council and therefore understands the need for modelling. This promotes the industry in that modelling is not only a process driven industry but is necessary to inform multiple of disciplines and stakeholders.

## **8.4 FLEXIBILITY**

The MPO provides ready access to resources. This is extremely necessary for the work to support the SHA, be it for a very short turn around for an individual land development query to a complex catchment model build. A recent example is of a catchment model build project that needed to be completed within six weeks to support development and inform on flood risks at known location. The project was a success since it was able to pull resources from the different "wider pool of resources" and did not have to go through a lengthy procurement exercise. The advantage of having the resources in-house meant that the scope and expectations could be clearly set each morning, access to senior management was available and any issues or risks were identified early on.

## **8.5 VALUE FOR RATEPAYERS**

The benefit of procuring some of the planning and modelling work through the MPO is through the savings which Council is realising. Not only are the rates of the MPO consultants negotiated to sole source rates but also the administrative project management cost is reduced by not having to tender each scope of work separately.

The savings from tendering by the consultant assumes four consultancies tender for the work and what the combined cost would be to the industry if that time was used to deliver chargeable work as only one of the consultancies would be successful.

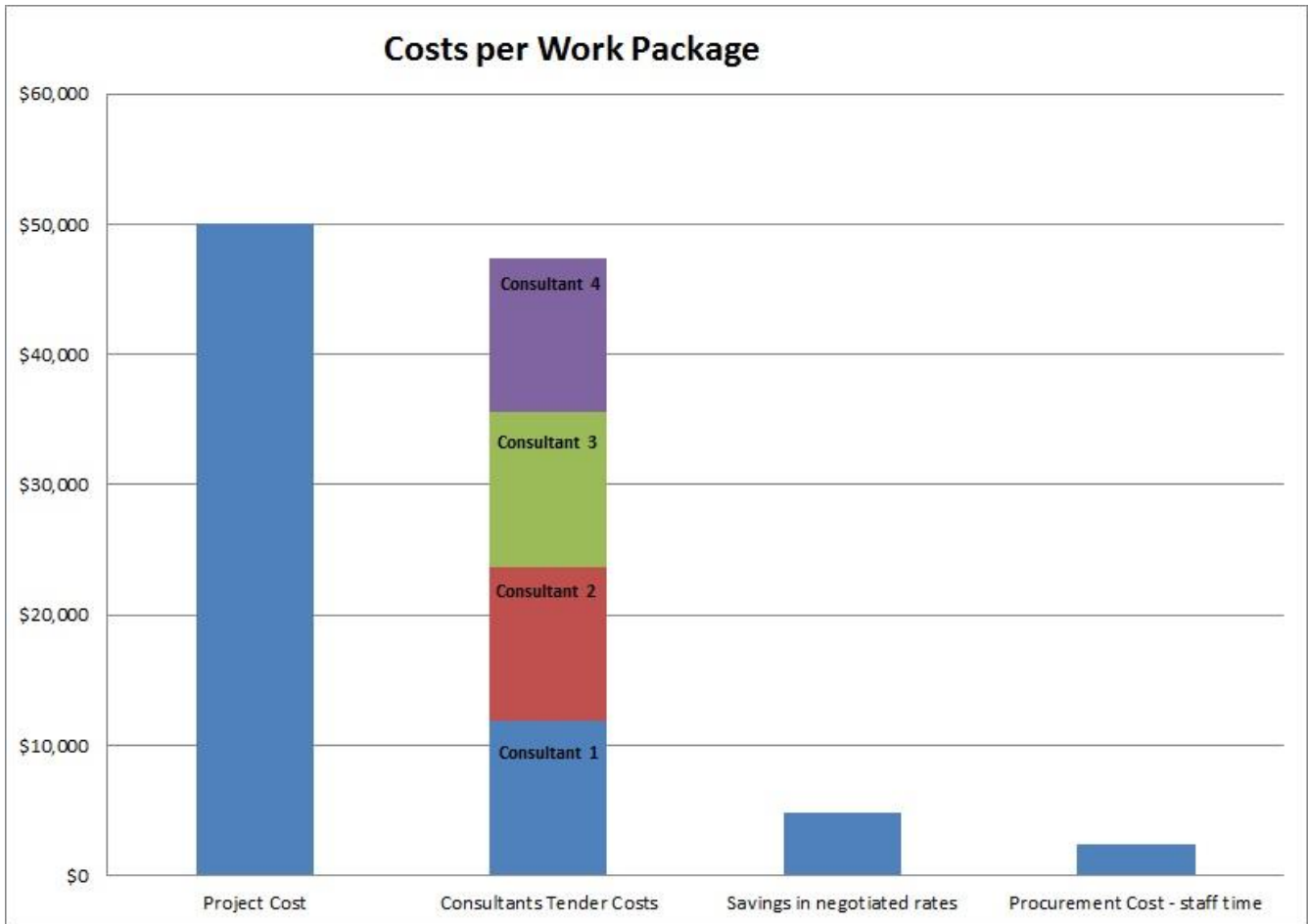


Figure 11: Savings realised through the MPO for a project/work package

The MPO has shown that the procurement arrangement can produce deliverables approximately twice as quickly as fully outsourced work. As discussed previously, this may be due to the nature of working in-house and no momentum on the project is lost. The check in times with AC are regular instead of the limited times as illustrated in the Modelling Process Diagram (refer back to Figure 4). Additionally, no time delay is incurred due to the setting up of multiple contracts for individual catchments and tasks. This could also take up anything up to two weeks depending on whether all documentation is available.

## 9 CONCLUSION

In summary, by

- Creating the MPO,
- Reducing the size of the work we award
- Creating an outcome-focused collaborative working environment
- Choosing the best skilled resource for each particular piece , and
- Creating a one team approach,

the MPO is demonstrating that more work can be achieved within shortened delivery times and in a manner that provides better value to Auckland ratepayers, whilst maintaining quality. Meeting these objectives helps to meet the city's objectives relating to unlocking growth and helping making Auckland the world's most liveable City.



## **ACKNOWLEDGEMENTS**

The consultants of the Modelling Project Office for the collaborative working relationship.

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